TRAFFIC ENGINEERING

A News Letter

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RECHARGE YOUR BATTERY

Has it been a tough year? Extra work and less help? Financial worries? Lack of appreciation for your efforts? Musings about the future? Hard on your enthusiasm and driving force?

We guarantee that the ITE Annual Meeting (same time and place as the Annual Safety Congress) will "recharge your battery."

Chairman Donald M. McNeil (Assistant Traffic Engineer, Pittsburgh) has a "live-wire" program lined up.

Accidents, up some 20 percent, will receive much attention. And, by the way, this bad accident record, together with increasing traffic loads, will help improve the status of wide-awake traffic engineers!

Traffic surveys! Dozens of new ones with new ideas, methods, uses, analyses. What a stimulating exchange of ideas there will be, both through papers and in free-for-all discussions.

New signaling ideas, including a paper on delays and length and division of cycles. Improved methods of solving tough signaling problems. Signal equipment standards.

Capacity research results, and other interesting committee reports.

Observance, enforcement, and the all important "human element" - knotty problems, but how important to the traffic engineer. Entirely new data on the national law observance picture. Enforcement discussions by recognized police leaders. The driver and how to deal with him — led by a keen-minded specialist in this field.

Federal Aid funds now available for grade crossing protection -- but with what kind of protective equipment? Some startling surprises - perhaps headline quality!

That's not all - but isn't it enough, especially with the always-so-valuable informal discussions with others of like interests, and the always stimulating Safety Congress, to warrant your decision to BE AT THE CLEVELAND HOTEL, CLEVELAND, OHIO, OCTOBER 2-3? YOU CAN'T AFFORD --- NOT TO BE ON HAND!

NOMINEES FOR OFFICES AT FALL ELECTION

Nominating tellers Harry Hemmings and Kenneth M. Hoover have submitted the following report of their canvass of nominating ballots:

	No. of Votes
For President (Two to be nominated)	
L. W. McIntyre	22
B. W. Marsh	4
R. L. Morrison	1
Total	27
For Vice President (Two to be nominated)	
R. L. Morrison	5
G. G. Kelcey	4
Earl J. Reeder	4
Miller McClintock	3
T. M. Matson	3
Scattering (Not more than 2 each)	8
Total	27
For Director (Four to be nominated)	
E. P. Goodrich	11
Miller McClintock	7
B. W. Marsh	6
R. L. Morrison	5
M. N. Halsey	4
H. F. Ilgner	4
Arnold H. Vey	3
Scattering (Not more than 2 each)	14
Total	54

In accordance with Section 2 of Article V of the By-Laws, the following are declared nominated and election ballots are being mailed on August 15th to all members qualified to vote.

For President

L. W. McIntyre

(In accordance with the By-Laws, Messrs. Marsh and Morrison - the only other members for whom votes were cast for President - are nominated for other offices, and therefore Mr. McIntyre is the sole nominee for President)

For Vice President
R. L. Morrison
G. G. Kelcey
Earl J. Reeder
(Messrs. Kelcey and Reeder, being tied for second place, are both nominated)

For Director
E. P. Goodrich
Miller McClintock
B. W. Marsh
M. N. Halsey
H. F. Ilgner
(Messrs. Halsey and Ilgner, being tied for fourth place, are both nominated. Mr. Morrison, being nominated for Vice President, does not appear as a nominee for Director)

Election at Annual Dinner. Ballots may be mailed or filed at Annual Dinner.

STUDY REVISED MODEL MUNICIPAL TRAFFIC REGULATIONS AT ONCE!

Quite drastic changes in arrangement and to a lesser degree in content, of the "Model Ordinance" warrant your immediate study - whether or not your municipality has a good traffic ordinance. If you haven't received the new material (which President Marsh asked to have sent to members) write at once to A. W. Koehler, Secretary, National Conference on Street and Highway Safety, c/o U. S. Chamber of Commerce Building, Washington, D.C.

Important new administrative provisions set up recommended powers and duties of traffic engineer, police division of traffic enforcement, etc.

In view of the considerable changes, there will be opportunity for correction of any errors which may have been made in interpreting the Conference action.

President Marsh points out that Article II, Section 8(c) of Part II, the Administrative Ordinance, should not, in his opinion, specify the study of accidents and analysis of factors involved as exclusively a police function. Where there is a traffic engineer, detailed accident analyses are usually carried out by him, though the police secure accident reports, file them, and usually make certain statistical summaries and a spot map.

Please send your comments on this and other matters to Mr. Koehler. Comments, to be considered, must be sent by Monday, August 20th. You need NOT have attended the conference to make suggestions.

THREE INTERESTING DEVELOPMENTS
IN SIGNAL CONTROL METHODS

1. Few airports are bisected by a public highway. Such is the case in Washington at the Washington-Hoover Airport, where the principal landing field is located on one side of Military Road, and many of the hangars on the other. To protect planes in taxiing from landing field to hangar, and in certain instances to protect highway traffic from low flying planes, the operators of the airport have installed a traffic control signal at the intersection of the runway and the highway. Controlled by the plane dispatcher in the administration building, the signal normally shows green for the highway. When it is desired to stop the highway traffic, the standard amber indication is shown, accompanied by the sounding of a siren mounted in the signal housing, followed by the red indication. Even though the location is unusual, and often there is no apparent reason for requiring traffic to stop, few violations of the red indication are reported.

2. A special signal indication has been developed by the Massachusetts Department of Public Works for intersections where pedestrian rather than vehicular traffic requires protection. Signals showing this indication are in operation on various state highways as well as on certain parkways under the jurisdiction of the Metropolitan District Commission.

Normally the signal shows flashing green on the heavily traveled artery and flashing red on the cross street, permitting a continuous movement on the artery. Vehicles on the cross street may enter after coming to a full stop in accordance with the Massachusetts code. The pedestrian interval is initiated by means of a push button, and consists of an amber clearance period followed by the usual red and amber pedestrian indication. After a predetermined time the signal reverts to its flashing operation.

The original installations at such locations utilized flashing amber instead of the present flashing green. The many violations of the red and amber indication were correctly traced to the similarity between the flashing amber, customary for caution signals, and the steady amber of the clearance period, and so the flashing indication was changed to green. The signals are now reported to be entirely satisfactory.

3. The Horni Signal Manufacturing Corporation has developed a means of superimposing a carrier wave on an existing circuit, permitting the transmission of one or more additional impulses without laying additional conductors. Such equipment makes it possible, for instance, to set any desired

special indication on the signals controlling traffic along the route of fire apparatus or other emergency equipment. The carrier wave is superimposed from the transmitter to the conductor by means of a condenser, a core-less transformer or a parallel wire, depending upon the voltage on the line. Similar equipment in a tuned receiver picks up the impulse, after which it is amplified and carried through a relay, which initiates any desired indication or sequence in the signal.

PROMPT IN ADOPTING NATIONAL CONFERENCE RECOMMENDATIONS

Spurred by an alarming increase in traffic accidents, authorities of various cities are taking vigorous steps to meet the situation. In Washington, two of the many excellent recommendations in "Guides to Traffic Safety" (a recently printed report of the Fourth National Conference on Street and Highway Safety) have been put to effective use. These are:

(1) A Traffic Safety Observers organization of 100 chosen citizens who report serious violations observed, thus enabling enforcement officials to send a polite note of warning to a large number of offenders not seen by police officers.

(2) A "Voice of Safety" car equipped with microphone and loud speaker which warns pedestrians and drivers of violations.

In the few weeks of operation, these plans seem to have produced results in reduced accidents.

In Detroit, an intensive drive on violations has been instituted.

MEMBERSHIP APPLICATIONS

The following applications for membership have been received since the last issue of Traffic Engineering. The Board of Direction requests that all members of the Institute, who may be acquainted personally with any of the following applicants, communicate with the Secretary and furnish him with any information in their possession which may aid the Board in determining the eligibility of the candidates for membership. In this connection it is especially important that a definite recommendation as to the proper membership grade in each case be given, since the grading must be based upon the opinion of those who know the applicants personally as well as upon the nature and extent of their professional experience. Communications relating to the applicants are considered by the Board as <u>strictly confidential</u>.

Edward J. O'Meara, Traffic Engineer, Wisconsin Highway Commission, Madison, Wisconsin. Mr. O'Meara is 46 years of age and has been employed by the Wisconsin State Highway Department since 1920. From 1920 to 1925 he was assistant to Mechanical Engineer, handling surplus war supplies allotted to the state. On January 1, 1926 he was appointed Assistant Traffic Engineer to the Commission, in charge of marking and signing the state highway system. From January 1, 1928 to the present time he has been Traffic Engineer for the Commission in charge of marking, signing, signal installation, accident prevention and state traffic officers.

Robert Arthur Mitchell, Designing Traffic Draftsman, office of Traffic Engineering, Philadelphia, Pennsylvania. Mr. Mitchell is 34 years of age and was graduated from Cornell University in 1921, receiving the degree of B. Arch. Until 1930 he followed the architectural profession in the positions of draftsman, structural designer and senior draftsman for a number of employers in various parts of the country. From November 1930 to the present time he has been Designing Traffic Draftsman in the office of Traffic Engineering, Philadelphia.

Charles Dorland Clark, Sub-division Engineer, Los Angeles County Regional Planning Commission, Los Angeles, California. Mr. Clark is 33 years of age and attended the University of California from 1919 to 1924 but did not graduate. He is a Junior Member of the American City Planning Institute. From 1924 to 1926, he was Chief Surveyor of the city of Montebello, California and later Topographical Draftsman in the Engineering Department in the city of Los Angeles. From 1926 to the present date he has been Sub-division Engineer of the Los Angeles County Regional Planning Commission, having under his jurisdiction the administration of subdivision control and in addition has conducted a county-wide traffic survey and is preparing the survey report.

W. Sherman Smith, Assistant Professor and Head of Department of Civil Engineering, University of Toledo. Professor Smith is 42 years of age and holds the following degrees: Purdue University, B.S. in C.E., 1913; University of Toledo, M.S., 1926; and University of Michigan, C.E., 1934. He is an Associate Member of the American Society of Civil Engineers and a Member of the Society for Promotion of Engineering Education. Before becoming connected with the University of Toledo he was Sales Engineer and Draftsman for L. Beckmann Company, Toledo, Ohio, for one year; Field Engineer of the Ohio Power Company for two years; and Second Lieutenant, Engineers, A.E.F. for one year. In 1919 he became Instructor of Civil Engineering, University of Toledo, teaching surveying,

mathematics, engineering drawing and mechanics. In 1926 he was promoted to his present position, teaching the following subjects: materials of construction, contracts and specifications, highway engineering, traffic control, etc. For the past two years he has been engaged in a study of the causes of automobile accidents in the state of Michigan. The resulting thesis was presented to the University of Michigan in 1934 for which he received the degree of C.E. Since 1933, Professor Smith has been a member of the Traffic Committee of the Toledo Automobile Club.

ACCELERATED TESTS FOR ROAD MARKING PAINTS AND LACQUERS

In 48 hours it is now possible to tell comparatively how well a traffic paint will wear -- whereas the customary road tests take several weeks.

The U. S. Bureau of Standards, the Highway Department of the District of Columbia, and W. A. Van Duzer, Director of Vehicles and Traffic of the District, have developed the first model of a simple machine for accelerated wearing tests. The machine consists essentially of a horizontal "paved" disc of about 15 inch diameter, which is driven by a vertical wheel of about 10 inch diameter with a flat rubber "tire" about two inches in width. The vertical "tired" wheel revolves the test disc so that a given point on the paved surface is contacted about 1800 times per hour. An electric motor furnishes the power. It may be possible to increase this speed somewhat, thus further accelerating the tests. Three different discs have been used. One "paved" with concrete, one with a bituminous surface, and a third with a smooth steel surface. The paint samples are hand-brushed onto the test disc in sectors. About 8 to 10 sectors have been used on the existing discs. A greater number of paint samples could be tested at the same time if a larger disc were used. The paints, which are of known consistency (or more accurately "mobility") are carefully hand-brushed onto the disc so that the samples do not overlap and are allowed to dry thoroughly before the test is started. Some of the poor paints show wear within a few hours, but in order to determine which one of the better paints wears the longest, it has been found necessary to continue the test, with the present machine for about 48 hours.

No doubt further improvements will include larger test discs, possibly somewhat higher speed, and perhaps a miniature automobile tire mounted on a wheel to do the actual wearing. While the machine has only been in use for a few weeks, the experience so far seems to indicate that the steel

disc, because of its more uniform surface, gives a fairer comparison between paints. Apparently the relative wear is about the same between the three surfaces.

Further tests will be made on other characteristics of traffic paints. For example, the mobility of the paint is obviously a factor of importance. For the type of painting machine used in the District, indications are that the mobility (which is an important factor of "consistency") as tested on the Gardner Mobilometer should be between 30 and 100 seconds. Paint giving a reading of 30 seconds will cover about 300 lineal feet per gallon, while that giving a reading of 100 seconds will cover about 250 feet per gallon. Tests will be made to determine how much the variance in mobility affects the wearing quality.

While the work has not been completed, some tentative conclusions are being reached regarding the desirable specifications for traffic paints.

Mr. Van Duzer has kindly agreed to act for the Institute in developing further information about traffic paints, to the extent that time and personnel permit. It is strongly urged that all members who have developed or know of even tentative standard specifications for traffic paints or "lacquers" developed as a result of tests, send a copy to Mr. Van Duzer, with information on the sponsorship, kind and extensiveness of tests made. By getting all such data together, it is reasonable to believe that specifications for more durable, cheap and generally satisfactory paints may result. WON'T YOUR HELP -- NOW?

SEE YOU IN CLEVELAND! !